



The Raleigh Amateur Radio Society's **EXCITER**

GET INVOLVED

- RARS General Membership meeting: Second Tuesday of the month.
- The RARS net meets every night except Saturday @ 8 p.m. on 146.640.
- The RARS Technical & Trader's net: Saturdays @ 8:00 PM on 146.64.
- RARS meets for a monthly dinner on the First Tuesday of each month. Its at 6:30PM at the Golden Corral Restaurant, 6129 Glenwood Ave., Raleigh.



PUBLIC SERVICE EVENTS

Interested in helping? Visit <http://www.rars.org/public-service.php>

frequently for our 2016 ham public service schedule.

RARS General Meeting

Topic: RARS pot luck Holiday party.

go to [page 17](#) for sign up info.

Wear your RARS shirt.

Date: December 13, 2016

Time: Meeting at 7:30 p.m.

Informal gathering and refreshments from 7 - 7:30 p.m.

Where: Ridge Road Baptist Church. 2011 Ridge Rd., Raleigh

New HAM / Elmer meeting, 6:00 p.m. before member meeting

Tadd Torborg, KA2DEW, Elmer Coordinator

[Click here for more information.](#)

RARS President's Message

We made it through the Thanksgiving season and have started on Christmas, even though it is becoming more difficult to distinguish that border. If you're one of the Black Friday shoppers, I hope you safely navigated the crowds and got a few bargains. Or maybe you decided to wait until Cyber Monday to order all the great ham gifts from the various online radio vendors. JARSfest was another great place for that rare ham gift as well as to meet and greet those you may have only known by voice on the repeaters. It's al-

[Continued on page 3](#)

RARS Officers

PRESIDENT

Dennis Keith
NC4DK
919-608-1301
NC4DK@yahoo.net

VICE PRESIDENT

Tom Lewis
N4TL
919-870-9342
N4TL2@yahoo.com

SECRETARY

Bob Chapman
NC1X
919-870-6385
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TREASURER

Greg Seamster
KE4PAX
919-859-0029
KE4PAX@arrl.net



The Raleigh Amateur Radio Society

The Raleigh Amateur Radio Society, Inc. (RARS) was founded in 1969 and continues to serve and support the amateur radio community in the greater Triangle area. In 1999, the society incorporated a new RARS and obtained 501(c)(3) non-profit tax status.

The objectives of the club are to promote worldwide friendship through amateur radio; to be of public service by providing radio communications in times of disaster, emergency, or civic needs; to educate members in radio technique, and to provide training classes to assist in obtaining amateur radio licenses.

Anyone interested in amateur radio is eligible to apply for membership. Dues for regular licensed amateurs are \$18 per year (from July 1 through June 30). Additional immediate family members pay \$5 each per year. Dues for licensed amateurs older than 59 or younger than 16 are \$12 per year. Dues for non-licensed associate members are \$9 per year. Applications for membership may be obtained from the treasurer or on the RARS website (www.rars.org).

Exciter

The Exciter is the official newsletter of the Raleigh Amateur Radio Society. It appears each month as a PDF on the RARS website at www.rars.org. Members receive email notification when the latest version is available. Please provide your email address to the Treasurer.

The Exciter welcomes articles, advertisements, and other contributions. To submit a piece to the newsletter, please contact the Editor. The Editor reserves the right to edit any and all pieces. The submission deadline for each month's Exciter is the third Friday of the preceding month. All submissions must be final. Drafts are not accepted.

The views expressed in the Exciter are those of the individual authors and do not necessarily reflect the views of the Editor or RARS.

Tom Lewis, N4TL, editor (editor@rars.org)

For Your Information

RARS General Meeting

Date: Second Tuesday of each month

Location: Ridge Road Baptist Church 2011
Ridge Road Raleigh, NC, 27607

Time: People begin arriving at 7 p.m. The meeting officially begins at 7:30 p.m.

RARS Monthly Dinner

All members and guests are welcome to the monthly (first Tuesday) RARS Supper, 6:30PM, at the Golden Corral Restaurant, 6129 Glenwood Ave., Raleigh. Informal and Dutch, just bring your appetite and best rag to chew. 73, Chuck, K4HF

RARS Repeaters in Raleigh

146.64-, 444.525+ (82.5) and

145.13- (82.5), (82.5 is the tone freq)

Join us for the nightly RARS net at 8 p.m. on the 146.640 repeater. All hams holding a Technician class license or higher are invited to check in. We welcome both RARS and non-RARS members to the net.

There is a net Listing on the RARS website click here. <http://www.rars.org/nets.php>

VE Testing

The RARS VEs will accept walk-in testing in February, May, August and November at 5:30PM, prior to RARS membership meetings at Ridge Road Baptist Church; the RARSfest in April; the Cary Swapfest in July; the JARS-Fest in November; and following RARS license classes. Please bring a photo ID, your original and a copy of your current license, your \$14 exam fee, and any valid CSCEs that prove passing elements beyond that of your current license. Visit www.rars.org for more information.

President's Message continued

ways a good idea to support your local hamfests.

Don't forget the December RARS meeting on December 13th. This will be a short meeting during which the 2017 RARS officers will be installed. Afterward, we will join in fellowship for the annual RARS Holiday Party. There is a link near the top of the RARS homepage to a Potluck page where you can enter the type of dish you will be bringing to the party. And no, Chuck is not bringing that many cannolis!

In closing, I want to take this time to express my great appreciation to all of you who have worked so hard and contributed so many selfless hours to make the mission of RARS a success. Our members are involved in a variety of public service events, scouting events, classes, contests, and other events throughout the year and many times these seem to go unnoticed.

As we proceed through the holidays, let's not forget the Reason for the Season. Please be safe as you travel near and far to visit with family and loved ones during this time of year.

73,

Dennis Keith
NC4DK

RARS Birthdays

Dave	KB8V	12/01
Smitty	K4ACS	12/02
Gary	KI4KKY	12/03
Glenn	KA4GLN	12/04
Ronnie	W4RJF	12/06
Frank	W4CWA	12/08
Mike	KM4SCO	12/08
Virginia	NC4VA	12/09
Clyde	WB2EYC	12/10
Mike	WA4BPJ	12/11
Roger	KS4VX	12/12
Frank	KA2FWC	12/12
Sam	KI4TRG	12/13
Joyce	KM4TCC	12/14
Conner	KE4ZNS	12/15
Charles	KM4AMT	12/18
Roger	W3EZR	12/18
Nancy	KM4KUT	12/24
Sam	KA4APE	12/24
Mario	N4TSV	12/25
Mike	KK4YAQ	12/27
Mike	WD4MB	12/27
Jason	KK4TLZ	12/29
Darrell	W4CX	12/29
Dick	KD4ISC	12/31
Gerry	K4GCJ	12/31

Future Hamfests

A full list of Hamfests can be found at the [ARRL website](http://www.arrl.org).

01/14/2017 | [Winston-Salem Firstfest](#)

Location: Winston-Salem, NC

Type: ARRL Hamfest

Sponsor: Forsyth Amateur Radio Club

Website: http://www.w4nc.com/ws_classic_hamfest_2016.htm

03/10/2017 | [Charlotte Hamfest](#)

Location: Concord, NC

Type: ARRL Hamfest

Sponsor: Mecklenburg Amateur Radio Society

Website: <http://www.charlottehamfest.org>

04/15/2017 | [Roanoke Division Convention \(Raleigh Hamfest\)](#)

Location: Raleigh, NC

Type: ARRL Convention

Sponsor: Raleigh Amateur Radio Society

Website: <http://rars.org/rarsfest>

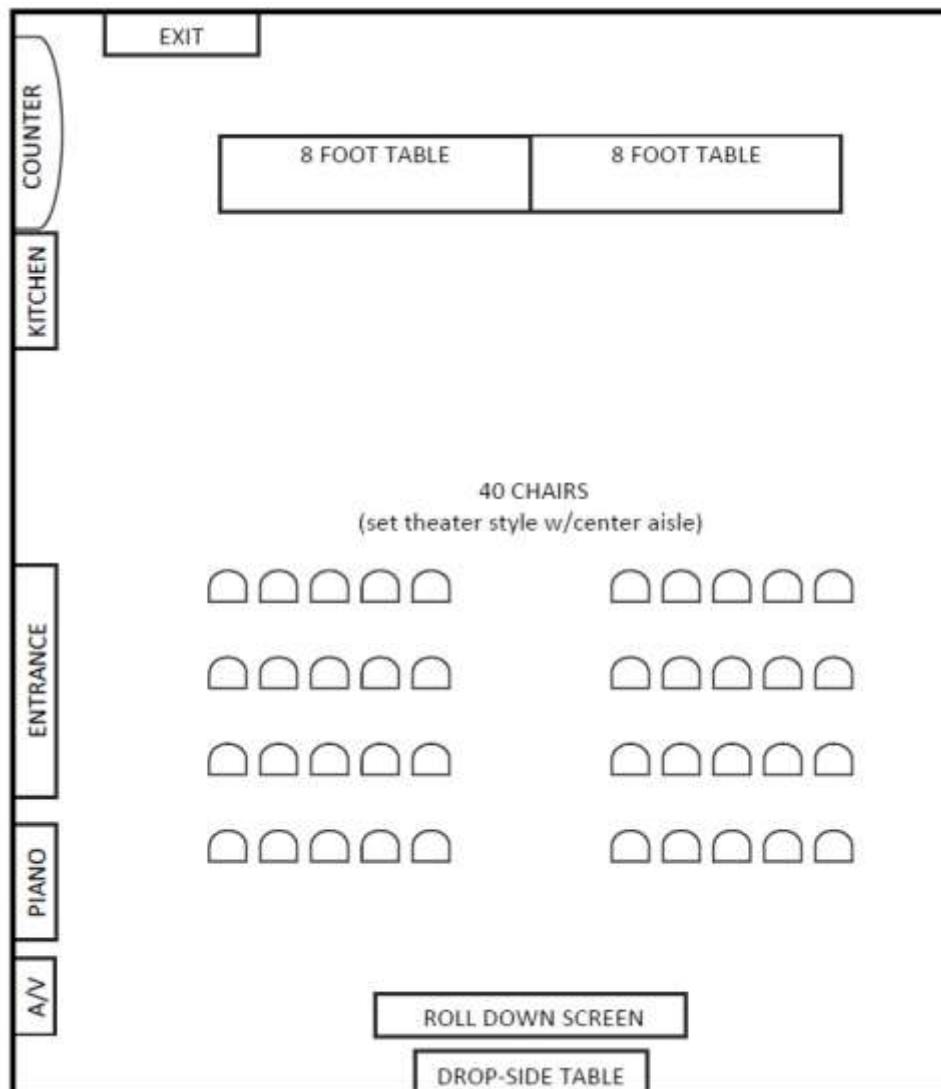
New Members

Todd Thomas	No License
Bill Bass	K4BUS
Marko Laitinen	KM4ZBT
Bob Shroyer	KM4ZBW

Church Meeting Room Layout

We have been reminded that all users of the meeting room are to leave it according to the layout shown below.

- **EXTRA TABLES**– should be returned to the rolling cart located at the end of the hallway in the Chapel.
- **EXTRA CHAIRS**– Up to 20 extra chairs may be stacked against the wall near the back corner of the room. Any more than 20 extra chairs should be returned to the rolling cart located at the end of the hallway in the Chapel.
- **TRASH CANS**– Should be placed in the corner near the back EXIT door.
- **PODIUM**– Should be placed in the corner near the A/V cabinet.



Church Facilities Use Checklist

Use of rooms:

- a. Turn off all lights.
- b. Make sure all doors are locked.
- c. Make sure all windows are closed and locked.
- d. Neatly return all tables and chairs to original places.

Use of Kitchen:

- a. All stoves turned off - nothing left on stoves or in ovens.
 - b. All coffee pots off and unplugged.
 - c. Garbage taken to dumpster behind fellowship hall.
 - d. Tables and chairs neatly returned to original positions.
 - e. Refrigerator doors shut tightly.
 - f. All faucets completely turned off.
-

October 8 RARS meeting door prize winners



Selene KG4RMT (portable antennas) and Julie WE3T (amateur workshop)

October 8 RARS Show and Tell



HF GO Kit by Daniel Marks
Radio, Battery and Tuner.



Alan AB4OZ telling about the equipment
setup at the RARSfest and how people make
a J pole antenna there.



Some of Alan's equipment

October 8 RARS Show and Tell



Carl W8WZ showing off a spark gap straight key that he restored



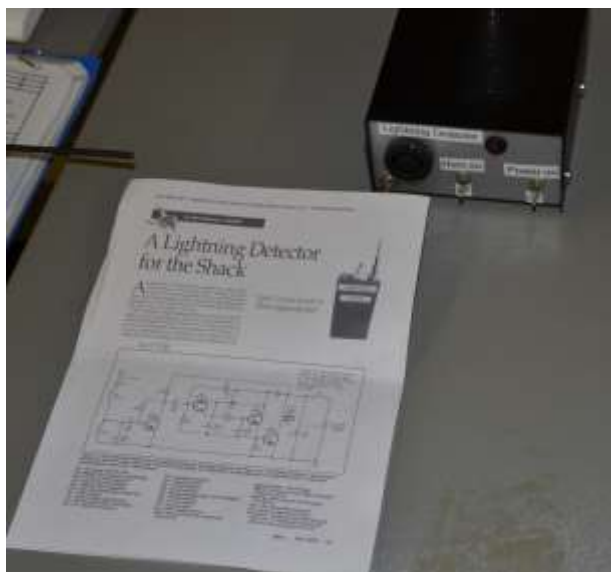
Murray K4MHM telling about his Painter Pole Mast and antenna.



Roger K4CLK and his RLCZ Bridge.



October 8 RARS Show and Tell



Lightning Detector made by W4AWT (SK)
shown by Tom N4TL



Tadd KA2DEW telling about a Packet
Radio 4 link station that was worked
on by him and Charlie WA3UTC.

New HAM / Elmer meeting,

6:00 p.m. before the member meeting

Tadd Torborg, KA2DEW, Elmer Coordinator

*The New Hams meeting is held every month before the regular RARs meeting.
We'll try to start by 6pm. We try to address topics in a manner that will be of help
to hams in their first year of operation.*

*Tadd / KA2DEW
tadd@mac.com
Raleigh NC FM05pv*

The New Hams meeting



Daniel Marks KW4TI and Donna Tyson KM4WRP.

Donna is talking on the GO KIT HF radio shown below.



HF GO Kit setup owned by Dan, KW4TI.

Photos by Tom, N4TL

Ham Public Service efforts

End of season report

17 Events

219 Ham Volunteers Utilized

158 Volunteer Hours

\$ 41,591 in kind dollars (\$19 x volunteer hours x events)

The first event for 2017 is The Odyssey of the Mind held on Saturday March 4, 2017

73 John, AI4RT

Vintage 6 Meter AM Net Monday's at 7:00PM on 50.400 MHz AM

The six meter group has moved its net to Mondays Nights.

73 Charles A. Davis Sr. WA3UTC

Education Director

The course schedule for 2017 has not been completed at this time.
When it is, it will be shared with the members and interested parties.

73 Murray Merner K4MHM

Kids Day 2017

This year ARRL Kids Day will be January 7 and June 18. Check ARRL website for details. Get kids on the air!

73 Murray Merner K4MHM,





2016 Occoneechee Council University of Scouting.

Left; Murray Merner K4MHM,

Sitting: Karl Bowman, W4CHX

Left to Right; Murray Merner K4MHM, Dave Price, K4KDP, ARRL NC Section Youth Coordinator - Scouting, Charles Good, KM4AMT, Karl Bowman, W4CHX



Course Title, Radio Scouting: What every unit leader should know about ham radio

For information about the Boy Scouts of America Occoneechee Council visit this website.

<http://www.ocscouts.org>

Photos provided by Murray Merner K4MHM

Girl Scout Radio and Wireless Technology Patch

The American Radio Relay League and Girl Scouts of the Green and White Mountains and Girl Scouts of Greater Atlanta have developed this patch to inspire girls to learn the fundamentals of radio communication and wireless technology (including Amateur Radio). It is available to all levels of Girl Scouts: Brownie, Junior, Cadette, Senior and Ambassador. This is also a way to expose the girls to STEM (Science, Technology Engineering and Math) areas and supports the Girl Scout Leadership Development Program of: Discover, Connect and Take Action.

The booklet of 36 pages is comprehensive in all aspects of communication. There are three sections and the Girl Scout has to complete a number of activities depending on her grade level. Page 12 introduces Morse Code and page 19 begins the material on RF; building a crystal set is an option on page 22 and Amateur Radio starts on page 23 and goes for 4 pages. The instructor is encouraged to get an Amateur Radio Operator to help. CERT (Community Emergency Response Team) and the NWS SKYWARN are mentioned as activities. We encourage our ham members to help the Girl Scouts in the pursuit of this patch.

Source: "Radio & Wireless Technology Patch Program" booklet.

Murray K4MHM



Patch courtesy of Dave Price, K4KDP

Tacky Tinsel Tour Net

It's time for the 2016 Tacky Tinsel Tour Net - Wednesday, Dec. 21, from 8-9 pm on the 146.64 repeater; this net will take the place of the usual RARS net that night! Co-hosted by Courtney Enzor KI4HOS and myself, the net will feature descriptions of some the best holiday light displays in the Triangle as well as a visit from a famous, very busy North Pole resident. The net would not be complete without the annual reading of Gary Pearce's poem, "A Ham's Night Before Christmas". Net participants will vote on

the best light display, and an 8.5" x 11" Special Event Certificate featuring the winner of the 2016 Tacky Tinsel Tour will be available from me. Please send me a 8.5" x11" self-addressed envelope if you check in and would like one. Please join in the fun, check into the net, and help us spread the holiday cheer!

73 and Merry Christmas!
Virginia Enzor NC4VA
Tacky Tinsel Tour Reveler

ARRL Straight Key Night

Each year from 0000 UTC to 2359 UTC PM January 1st is the annual **ARRL Straight Key Night**. This 24-hour event is not a contest; rather it is a day dedicated to celebrating our CW heritage. Participants are encouraged to get on-the-air and simply make

enjoyable, conversational QSOs. There are no points scored and all who participate are winners. For full information go to this link,
<http://www.arrl.org/straight-key-night>

Tar Heel Scanner/SWL SIG group

The Tar Heel Scanner/SWL SIG group met on November 21st at Red Hot and Blue restaurant on Falls of Neuse Road in Raleigh. Ten people attended.

Tom McKee, K4ZAD, gave a presentation on the SDRplay receiver and the SDR-Radio software package. Tom reviewed the different versions of SDR-Radio and demonstrated things that it can do.

He also discussed the SDRSpace website and the remote receivers that can be controlled using the SDR-Radio software. See this at: <http://sdrspace.com/Version-2>

The next meeting will be held on December 19th at Red Hot and Blue. This will be our annual Junk Box Giveaway and Mag-

azine Swap where people bring in old electronic gear and radio related magazines to share with others in the group.

Meetings are held on the third Monday of each month. We meet at 6:30 for dinner and the meeting begins at 7:30 and ends at 9:00. For more information and announcements about the upcoming meetings, see the Tar Heel Scanner / SWL SIG Yahoo group (<https://groups.yahoo.com/groups/tarheelscanner>).

73,

Kelly

AE4FG

Future RARS Presentations

12/13/2016	RARS pot luck Holiday party. Sign up at the RARS website. RARS Officers induction.	Election committee
1/10/2017	Writing for QST & Arduino CW Trainer	Tom Lewis, N4TL
2/14/2017	Ham Radio and small UAVs (Drones)	Tiia, KM4CMQ
3/14/2017	Awards, RARS Birthday Party (2/12/69) & RARSfest Update	RARSfest chair

Raleigh Amateur Radio Society
Board of Directors Meeting Minutes
October 18 , 2016

The Board of Directors of the Raleigh Amateur Radio Society met Tuesday, October 18, 2016, at Ridge Road Baptist Church. President Dennis NC4DK called the meeting to order at 7:00 p.m.

Present: Dennis NC4DK, Marty W4MY, Murray K4MHM, and Bob NC1X. This group did not represent a quorum.

Approval of the minutes of the September 20, 2016, Board of Directors meeting were postponed due to the lack of a quorum.

Treasurer: Greg KE4PAX. (By e-mail) Greg was not present but sent a report to the board via RARS-l. Current membership is 331 including 13 Life or Honorary members. Anyone who did not receive Greg's Report of October 18 may inquire of the Secretary for additional details.

Secretary: Bob NC1X - We received a communication from Larry Young, K4LXV's daughter saying Larry has late stage cancer and is at Duke again after being in and out of rehab. She did not give details but said it is all right to divulge this information to members.

Directors' Reports:

Public Information Officer (via NC4DK): An updated version of the RARS brochure, with proposed edits, was presented and discussed by those present.

Continued on the next page

Public Service, Education, and At-Large directors were absent or had no report.

Other Reports:

Field Day: Marty W4MY presented a slide show of a proposed new location for field day, which will have air-conditioned spaces and real bathrooms. An informal discussion followed.

New Business: None

The next Board Meeting will be Tuesday, November 15, at 7:00 p.m. at the church. The meeting was adjourned by President Dennis NC4DK at 8:00 p.m.

Respectfully Submitted,
Robert E Chapman, NC1X

RARS Pot Luck Holiday Party

Our next meeting on December 13 will be the Pot Luck Holiday Party. Please bring some food to share. Sign up at the [RARS website](#).

Next RARS [Meeting](#) - Tuesday, December 13, 2016
Ridge Road Baptist Church, 2011 Ridge Road, Raleigh, NC 27607
Christmas Party (Details to follow) Members please [sign up here](#) to bring a snack to share
Installation of 2017 RARS Officers and Committee Chairs
6:00 PM: New Ham / Elmer meeting. [General meeting info and Map](#)
7:00 PM: General Social/Gathering. [Have an idea for a meeting?](#)
7:30 PM: Business meeting and program. [Email the RARS Vice President](#)

MINUTES
Raleigh Amateur Radio Society
General Membership Meeting
November 8, 2016

The monthly membership meeting of the Raleigh Amateur Radio Society met at the Ridge Road Baptist Church in Raleigh. The meeting was called to order by President Dennis, NC4DK, at 7:29 p.m.

There were 35 members present, which did constitute a quorum.

There being a quorum present, a motion to accept the minutes of the October 11 meeting, as published in the Exciter, was made, seconded and approved.

Vice President: Tom N4TL: Next month's membership meeting will be a potluck supper/Christmas party and officer inductions. Tom thanked contributors to the Exciter who make it an interesting publication.

Treasurer: Greg, KE4PAX, (No Report)

Secretary: Bob NC1X reported that Larry K4LXV is transiting from Duke Hospital to an undetermined rehabilitation facility. He does not desire communications from other than his family at this time. The Secretary will communicate any new news to the Board and Membership when it becomes available.

Continuing Announcements:

The RARS Dinner takes place monthly on the first Tuesday (next: December 6th) at 6:30 p.m., at the Golden Corral, 6129 Glenwood Ave.

The RARS Board meeting takes place monthly on the third Tuesday at 7:00 p.m. in a conference room here at the Church. Members are invited to attend.

An After-meeting gathering takes place after each Membership meeting, at Applebee's, Hillsboro and Gorham Streets.

A New Ham / Elmers meeting with new hams and anyone interested takes place before each membership meeting, at 6:00 p.m. at the church. Today's activity included a mobile station powered by Lithium batteries. They talked to Washington Island on 40 meters, about 1000 miles away, with a hanging wire antenna.

Continued on the next page

Board & Committee Reports

Public Service (John AI4RT): PS season is over but will resume in the spring.

Education Director (Murray K4MHM): No report

Field Day (Dennis NC4DK): Marty W4MY will be field day chair for the next few years. Marty: Changes are going to happen this year.

FM Repeater (Karl W4CHX): no report

N.C. QSO Party (Marty W4MY): QSO party will be Feb 26, (Sunday) 1000-2000 EST. There are 13 categories of awards and other states will be looking for us. The day before will be the S.C. QSO Party.

At Large Directors: – no reports

Guests: Robert Shroyer (n.c.), Chad Cecil N4CTZ, and Bob Arnes.

Door Prizes: Door prizes were won by Selene KG4RMT (portable antennas), and Julie WE3T (amateur workshop).

Dennis NC4DK announced that the club received a note from the family of Marvin Heller KD4OLW (SK) thanking us for the donation to the Dick Bitner Benevolent Fund in his memory. Marvin passed recently; he was a ham 1992 to 2002.

Elections: Chuck Littlewood K4HF announced nominations for RARS officers:

RARS Officers for a two-year term:

Vice President – Tom Lewis, N4TL

Treasurer- Greg Seamster, KE4PAX

Board Members for one-year term:

Public Service Director – John Snellen, AI4RT

Public Information Officer – Charles Good, KM4AMT

RARS Exciter Editor – Tom Lewis, N4TL

RARSfest 2017 Chair – Ian Hewitt, N0IAN

RARS Net Manager – Mary Holtschneider, KG4OQA

At-Large Director – Joanne Mars, AA3N

At-Large Director – Raymond LeFrancois, NC4OO

At-Large Director – Marty Young, W4MY

Continued on the next page

FM Repeater Chair – Karl Bowman, W4CHX
W4DW, W4RNC, N4RAL Trustee – Jeff Wittich, AC4ZO
ARRL Liaison – Chuck Littlewood, K4HF
RARS Webmaster – Hank Montgomery, K4HM
RARS Chairs:
RARS Food Service Chair – Bill Mars, AK4BL
RARS NC QSO Party Chair – Marty Young, W4MY
RARS 2017 Field Day Chair – Marty Young, W4MY
RARS Volunteer Exam Coordinators – Liz White, K04CK, & Joe White, WA4GIR

Nominations were closed and the slate was elected by acclamation.

Show & Tell: Tom N4TL introduced the providers of items for show & tell:

-Tom N4TL described his lightning detector which detects the 136 KHz static crashes.

-Dan KW4TI described his ten-pound portable HF/VHF/UHF station with a Li-Ion-Phosphate battery and tuned end-fed antenna.

-Alan AB4OZ demonstrated his eight-station setup for building J-pole antennas at RARSfest, built mostly from scrap. From ten years of building J-poles Alan has optimized the construction tools and techniques.

-Carl Davis W8WZ showed his key designed for spark-gap transmitters, circa 1916.

-Roger K4CLK showed his R-L-C Bridge.

-Micro-internet controller Raspberry-Pi based built by Charlie W3DC

-Murray K4MHM demonstrated his portable antenna mast for a J-Pole on top of a sixteen foot painter's pole.

The meeting was adjourned by President Dennis at 8:49 p.m.

Respectfully Submitted,
Robert E Chapman, NC1X
RARS Secretary

Pictures from JARSFest November 20, 2016.

All photos by Joanne AA3N



Walter KG4JOK and Willie KF4IZE



Wade KK4UGY & Lee AK4XZ



Chuck Littlewood, K4HF &
Mike Ramsey, KD4OKR



Tom N4TL & Chuck K4HF



Barry NC4AZ



Mike KD4MC

JARSFest Pictures



Bill Morine, N2COP, Vice Director – Roanoke Division
Karl Boman, W4CHX, ARRL NC Section Manager



Mike KD4MC, calling the winner of
one of the drawings, NC8G



Bill Morine, N2COP, working
at the ARRL table



Karl Boman, W4CHX, ARRL NC Section Manager
Tom Lewis, N4TL, VP RARS
& Bill Morine, N2COP, Vice Director – Roanoke Division



Carl W8WZ, Dennis NC4DK,
Dennis WZ0Q, Lannie KK4QEF



Susan KD4QKW, Hargrove KE4RUN
(tall one) & John N1GMV

JARSFest Pictures



(Far left, someone from Fayetteville), Tim W4TAR, John N4RMV, & Steve KA0GMY



Nathan KM4DVE & Tadd KA2DEW
in front of the table



JARSFest Kitchen volunteers



Dennis WZ0Q & Alan AB4OZ



Joe W3OJO



Larry of AC/DC Electronics
& Chuck W2WNC

JARSFest Pictures



AC/DC Electronics



K4HF/N4TL Tables after a good day



Joel, W3RFC of R F Connections seated

JARSFEST 2016

The Johnson Amateur Radio Society hosts the JARSFest. You can visit their website and read their newsletter at this URL.

<http://jars.net/news.html>



Jetstream JTPS31MB 30 amp power supply

images borrowed from the internet

RARS Classified

for sale ICOM IC-746 with CW filters

Posted November 29th, 2016 by: N4TL

Contact: n4tl2@yahoo.com

ICOM 746 (non-Pro) for sale in excellent condition. SN 6844. No mods or problems. ICOM HM-36 microphone, manual, power cord, and box are included. There are three optional filters installed in the radio. They are the FL-100, 500 Hz; FL-52A, 500HZ; and a FL-223, 1.9 KHz filter. These three filters are available on eBay for \$55, \$125 and \$87, total \$267. I am the second owner, the original owner was N4GM (SK) who only operated on CW. Both of us are nonsmokers. I have not used it in a while so I used it this morning to check in a net on 75 meters. I had to use the built in tuner on 75 meters. The radio and tuner works fine. I will also include a CD that a friend gave me. It has the instruction and service manuals. It also has a program that will let you edit the CW memories from an attached computer. I have not used the program but I assume it will work. \$600.00. N4TL, Raleigh NC.

ARRL Technician Class License Manuals - \$15.00 each (current questions)

Posted November 25th, 2016 by: N4MN

Contact: robert.m.cox@gmail.com

I have four (4) of the third addition ARRL Technician Class License manuals for sale. These are currently offered on Amazon for \$23.03. I am offering these for \$15.00. These are the license manuals that the Boy Scouts used during their tech class. The questions are valid until 6/30/2018. If you know anyone that needs a manual, this is a great deal.

Heathkit SB-230

Posted November 4th, 2016 by: WA3UTC

Contact: charlie-davis@nc.rr.com

Heathkit SB-230 HF Linear amplifier Near Mint \$350.

RARS Classified

VHF/UHF MOBILE FOR SALE

Posted November 4th, 2016 by: KD4AGQ

Contact: kd4agq@arrl.org

YEASU FTM 10R with microphone and front mic connection installed.

Nifty Mini Manual included.

rugged all weather radio for motorcycles, GO boxes and portable set-up.

\$200. contact KD4AGQ@arrl.org.

Estate Sale for N8DDK (Continued-B)

Posted November 4th, 2016 by: WA3UTC

Contact: charlie-davis@nc.rr.com

RM Italy VLA200 144 MHz Amplifier (Preamplifier LED burnt out, Preamplifier works well) Good

\$125.00. Saleae Logic 8 Logic Probe Good \$95.00

Estate Sale for N8DDK

Posted November 4th, 2016 by: WA3UTC

Contact: charlie-davis@nc.rr.com

The following equipment from the estate of Don Cowden, N8DDK is available. All proceeds from this sale will go to his widow Judy Cowden.

Flex 3000 HF Transceiver With Microphone below \$900.00

Heil HM-5 Microphone with stand and Adaptor is included in the sale of this radio.

Information Request

Posted November 3rd, 2016 by: W4MBD

Contact: mcneillr@ec.rr.com

Anyone having personal experience with the Icom IC-7100 Transceiver is requested to send their comments/opinion,etc to W4MBD.Thank you.